

Book Reviews

Dinosaur Paleobiology

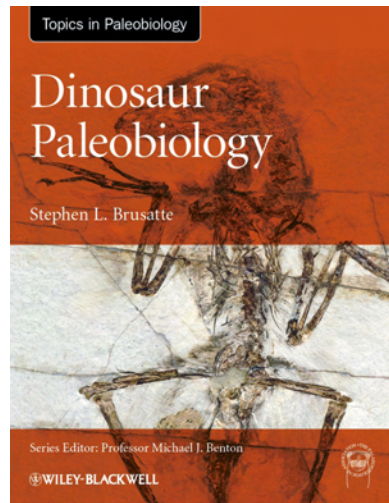
Stephen L. Brusatte. 2012. Wiley-Blackwell. 322 pp. £34.95 (paperback). ISBN: 978-0-470-65658-7.

Dinosaur Paleobiology is an excellent, very well illustrated, introductory book to the study of dinosaurs. It is written by one of the most productive young palaeontologists of our times, Stephen Brusatte, and summarizes the most up-to-date research concerning the biology of dinosaurs in a concise and easily understandable way.

The book starts with a short introduction to what dinosaurs are, both by definition, as well as from a more evolutionary point of view, highlighting the morphological features that characterize the group. The order of the subsequent chapters follows the process of palaeontological research, starting with a detailed discussion of hard tissues and their anatomy, given that most dinosaur specimens preserve just bones or teeth. Soft tissues follow, then phylogeny, before we get to the more “life-related” topics like form, locomotion and posture, feeding and diet, reproduction, growth and physiology, and finally arrive at wider topics such as palaeoecology and dwelling, and macroevolution and extinction. Thanks to this structure, the reader can closely follow the process of palaeontological studies, starting with what is actually fossilized and found, and subsequently including more and more evidence and analytical tools to understand dinosaur biology. This is facilitated by the avoidance of technical terms where possible, and their careful introduction where necessary.

Every chapter is introduced by a short abstract, stating the most important issues and questions asked in the section. The main part of each chapter then reviews a vast number of recent scientific papers on the topic under discussion (more than 40 pages of references are listed). The chapters finish with a conclusion, which points to the most active and exciting research in the respective field, and open questions that still need to be solved.

Throughout the book, Brusatte provides easily understandable examples of important research concepts and methods, which can be difficult to comprehend by only reading the technical literature. Comprehensibility is further enhanced by 175 figures and 16 colour plates, which are all freely available on an accompanying website as Powerpoint slide shows for teaching or personal use. The only criticism here is that the figures are black and white, both in the book and online. Whereas this is understandable for the book (it keeps at least the paperback at a reasonable price), the online figures could have been provided in colour. Be that as it may, the fact that the material





is freely available online definitely renders this book the perfect candidate as an introduction to dinosaur palaeobiology for undergraduate studies. Not only that, this book provides the most up-to-date and comprehensive list of research on the various dinosaur subgroups. Consequently, it could also help more experienced palaeontologists who might be starting research with subgroups they are not familiar with.

Unfortunately, some errors were not detected before printing, the most important of these probably being in the captions of Figures 1.16 and 2.20, which mention a small theropod called *Miragaia*. *Miragaia*, however, is an aberrant, long-necked stegosaur from Portugal (Mateus *et al.* 2009), as correctly explained on page 185, in the section about ornithischian feeding. The bones in the two figures are indeed from a small theropod, called *Mirischia* (S. Brusatte, pers. comm., 2014). Very few typos are present and do not affect the readability of the book.

In sum, I highly recommend this book both to undergraduate students interested in the latest research on dinosaurs, and also to more experienced scientists specialized in one group, who want to update their knowledge of current research in other dinosaurian subclades. Moreover, together with the slide shows available online, it provides a valuable source for teaching dinosaur palaeobiology at secondary school and university level.

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REFERENCE

MATEUS, O., S. C. R. MAIDMENT, and N. A. CHRISTIANSEN. 2009. A new long-necked “sauropod-mimic” stegosaur and the evolution of the plated dinosaurs. *Proceedings of the Royal Society B: Biological Sciences* 276: 1815–1821.

Early Miocene Paleobiology in Patagonia: High Latitude Paleocommunities of the Santa Cruz Formation

Sergio F. Vizcaíno, Richard, F. Kay and M. Susana Bargo (Eds.) 2012.
Cambridge University Press. £105 (hardback). ISBN: 978-0-521-19461-7.

This is the second excellent volume on the palaeontology and palaeobiology of the non-marine mid-Cenozoic of Patagonia in recent years, being preceded by Madden *et al.* (2010). Both volumes are the work of a large number of contributors, many from the University of La Plata (UNLP), Department of Vertebrate Palaeontology, and other institutions in Argentina. Taken together, these publications demonstrate the tremendous human resource within Argentina devoted to the study of Vertebrate Palaeontology, and also their high level of expertise. By good fortune I spent three years (1970–1973) at UNLP as Visiting Professor in Micropalaeontology. My *boliche* being near Vertebrate Palaeontology, I made friends there, especially with the Professor, the late Rosendo Pasqual who – with many of his staff and students, especially the late Dr Oscar Odreman-Rivas – inspired my enthusiasm and interest in fossil mammals and the great significance of the South American fauna. Reading this book has rekindled that interest and renewed my pride at having worked at the Museo de La Plata.